St. Paul Island, Alaska

Request for No Further Remedial Action Planned

Site:

The Five Car Garage and Anderson Building, also known as Two Party Agreement (TPA) Site 9j and National Oceanic and Atmospheric Administration (NOAA) Site 25

Location:

St. Paul Island, Alaska is approximately 800 miles southwest of Anchorage in the Bering Sea. On St. Paul Island, the Five Car Garage and Anderson Building are situated at the bottom of Village Hill in the central portion of the city of St. Paul near the community grocery store (57°07'21" latitude, 170°16'50" longitude). The building and immediately adjacent lands are located on U.S. Government property in Tract 46 (Figures 1 and 2).

Legal Description:

Tract 46, Township 35 South, Range 132 West, of the Seward Meridian, Alaska, as shown on the dependent resurvey of a portion of U.S. Survey No. 4943, Alaska, Tract "A", St Paul Townsite, officially filed June 3, 1997 (Figure 2).

Type of Release:

The Five Car Garage utilized an underground storage tank (UST) located on the east side of the building; the UST was removed in August 2000 and contaminated soils were documented, but were not removed at the time due to concerns regarding buried utilities in the vicinity. Three aboveground storage tanks are staged at the Anderson Building and were believed to have contributed to contamination of the area. Drums containing antifreeze, diesel fuel, lubrication oil, hydraulic oil, waste oil, and brake fluid have been observed at the facility (NOAA 2003).

History:

The Five Car Garage is situated along Sandy Lane in the northeast portion of the City of St. Paul, northeast of the community grocery store. The building was likely constructed in the early 1950s. In recent years, the Five Car Garage has been used as an automotive repair shop known locally as "Mike's Auto;" the facility includes an oil-changing pit in the floor with no known drain. A suspected floor drain was traced from the north side of the building to the south into Sandy Lane where it terminated at the City of St. Paul sewer line (NOAA 2003).

The Anderson Building is situated immediately northwest of the Five Car Garage. It was constructed in 1987 by the Tanadgusix Corporation, which leased the building for use as a seafood storage facility by Unipak and currently by Trident Seafoods. The Anderson Building is located on ground that was formerly occupied by three buildings used in commercial fur seal harvest operations; these buildings were known as Salt House B, Wash House A, and Wash House B (NOAA 2003).

Summary of Site Investigations:

In August 2000, an underground storage tank (UST) was removed from the east side of the Five Car Garage; the UST was in deteriorated condition and analytical data for soil samples indicated that a release of petroleum had occurred. However, no further excavation of contaminated soil

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was conducted at that time because of concerns regarding buried water, sewer, and telephone lines in the immediate area (NOAA 2003).

During the summer of 2000, CESI advanced soil borings, and installed and sampled groundwater monitoring wells in the vicinity of the Five Car Garage and Anderson Building (CESI 2001). Additionally, IT Alaska conducted groundwater sampling in 2001 (IT Alaska 2002), while TTEMI performed groundwater sampling in 2003 and 2004 (report pending).

Soil analytical data collected during these events revealed the presence of petroleum contamination including diesel-range organic compounds (DRO) and residual-range organic compounds (RRO) at maximum concentrations of 4,700 milligrams per kilogram (mg/kg) and 15,600 mg/kg, respectively. These concentrations exceed the ADEC levels under Method 2 and alternate method cleanup levels (ADEC 2000). The results and locations of these historical soil samples are shown on Figure 3.

NOAA contractors conducted quarterly groundwater monitoring at 3 monitoring wells in the vicinity of the Five Car Garage and Anderson Building (Figure 4). Results detected diesel range organics (DRO) at low levels during all sampling events, but never above the Table C cleanup levels. No other contaminants exceeded the Table C cleanup levels (NOAA 2003).

Mitretek Systems (2002) evaluated the 2000-2001 groundwater data for the St. Paul Village area, which includes the Decommissioned Power Plant Annex. The Mitretek report demonstrated that groundwater in the vicinity of St. Paul Village has high total dissolved solids and can be brackish. Consequently, the groundwater in the area is not suitable for drinking water. The evaluation, in part, provided a rationale for using alternative groundwater cleanup levels that are protective of human health and the environment where the groundwater is not potable. Mitretek concluded in accordance with 18 AAC 75.350 (ADEC 2000) that groundwater in the Village area is not currently used and does not afford any potential future use as a drinking water source. These findings provided the basis for the application of the Ten Times Rule discussed below.

Summary of Applied Cleanup Levels:

NOAA employed ADEC Method Two cleanup criteria, discussed at 18 AAC 75.341(c) (ADEC 2000). Alternative cleanup levels were also applied for some compounds. For benzene, under the TPA, NOAA had the option to cleanup to the less stringent State of Alaska cleanup level in effect in 1991 (ADEC 1991). Additionally, NOAA proposed and ADEC approved the use of alternative cleanup levels under 18 AAC 75.345 and 18 AAC 75.350, commonly referred to as the Ten Times Rule (ADEC 2002, Mitretek Systems 2002). According to these regulations, if groundwater beneath a site contains contaminant concentrations above the cleanup levels provided in ADEC Table C, then the soil may be remediated to levels ten times higher than those provided in Method Two Tables B1 and B2 for the migration to groundwater pathway for those contaminants found in groundwater at concentrations above the cleanup levels provided in ADEC Table C; however, if the inhalation or ingestion pathway values are more stringent than the migration to groundwater pathway, then the more stringent value is to be applied. ADEC uses 15 feet below ground surface (bgs) to define subsurface soil to which residents will have a reasonable potential to be exposed through the inhalation or ingestion pathways (ADEC 2000; 18

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Alaska Administrative Code 75.340 (j)(2)). Therefore NOAA is not obligated to excavate contaminated soil occurring at depths deeper than 15 feet to address the inhalation and ingestion pathways.

Summary of Cleanup Actions:

NOAA contractor Tetra Tech EM Inc. (Tetra Tech) and its subcontractor Bering Sea Eccotech (BSE) initiated corrective actions at the Former Fouke Bunkhouse on July 28, 2003 (NOAA 2004). Excavation activities began along the east side of the Five Car Garage, where the former UST was located (Figure 5). Clean overburden was removed from the area and the excavation was advanced to a maximum depth of 12 feet bgs, where groundwater was encountered at the north end of the excavation. During excavation activities, personnel uncovered a satellite cable and internet service trunk line to the island along the east side of the excavation. Additional excavation was prevented in this area due to the presence of groundwater and various utility lines, including a live electrical line and the cable line (Figure 6). Five confirmation samples were collected from the excavation including two from the bottom and three from the sidewalls. Confirmation samples were shipped for laboratory analyses, including benzene, toluene, ethylbenzene, and total xylenes (BTEX), DRO, gasoline-range organic compounds (GRO), RRO, select polynuclear aromatic hydrocarbons (PAH), and lead (Figure 6).

In addition, two test pits were excavated south of the Five Car Garage on either side of Sandy Lane to investigate reports from local officials regarding contaminated soil identified during previous construction activities in the area (Figure 5). First, a shallow test pit was excavated along the north side of Sandy Lane near the southeast corner of the Five Car Garage, but it could not be advanced beyond 2 feet bgs because of extensive, unknown utility lines; no evidence of contamination was observed and a TLC screening sample was collected from this location. Second, a test pit was excavated to a maximum depth of 6 feet bgs along the south side of Sandy Lane across from the Five Car Garage; no evidence of contamination was observed and one confirmation sample was collected from the bottom of the excavation for laboratory analyses including BTEX, DRO, GRO, RRO, select PAHs, and lead (Figure 6, Tables 1 and 2). Results from analysis of the confirmation samples indicated DRO concentrations varied from not detected to 250 mg/kg; only one of the samples collected from this site equaled or exceeded the ADEC Method Two cleanup level of 250 mg/kg, and no samples exceeded the alternative cleanup level of 2,500 mg/kg (Table 1). The elevated concentration of DRO was detected in sample SP25-CS-002-120, collected from the bottom of the north side of the excavation at 12 feet bgs. Concentrations for all other contaminants were below the ADEC Method Two cleanup levels except for one sample that exceeded the method 2 cleanup level for benzene of .02 mg/kg. sample SP25-CS-003-060, which had benzene at .41 mg/kg. Laboratory reporting limits were below ADEC Method Two cleanup levels for all analyses except benzene. For benzene, reporting limits of at most 0.03 mg/kg were achieved, which is above the ADEC Method Two cleanup level of 0.02 mg/kg, but below the alternative cleanup level of 0.5 mg/kg. No samples exceeded the alternative cleanup level for benzene of .5 mg/kg. None of the samples exceeded the ADEC method 2 levels for PAHs (Table 2).

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During the corrective action, a total of approximately 15 CY of PCS was removed from excavations at the Five Car Garage. This soil was stockpiled at the Tract 42 landfill site, pending final disposal at the National Weather Service land spreading site, or other ADEC approved disposal alternative. Following excavation and collection of confirmation samples, the site was backfilled to grade with clean fill soil.

On July 30, 2003, personnel initiated excavation activities at the Anderson Building in the vicinity of an AST located on the east side of the building (Figure 5); the AST was moved temporarily to allow excavation in this area, and was replaced upon completion of excavation activities. The area of excavation was selected based on the presence of the AST as well as historical sampling information. The excavation was advanced to a maximum depth of 7 feet bgs based on the results of TLC screening sample analyses. Six confirmation samples were collected from the excavation, including three from the bottom and three from the sidewalls. Confirmation samples were shipped for laboratory analyses including BTEX, DRO, GRO, RRO, select PAHs, and lead (Figure 6, Tables 1 and 2).

Results from analysis of the confirmation samples indicated DRO was not detected, with detection limits of 10 mg/kg, which is below the ADEC Method Two cleanup level of 250 mg/kg, (Table 1). Concentrations for all other contaminants were below the ADEC Method Two cleanup levels. Laboratory reporting limits were below ADEC Method Two cleanup levels for all analyses except benzene. For benzene, reporting limits of at most 0.04 mg/kg were achieved, which is above the ADEC Method Two cleanup level of 0.02 mg/kg, but below the alternative cleanup level of 0.5 mg/kg. No benzene was detected.

During the corrective action, a total of approximately 65 CY of PCS was removed from excavations at the Anderson Building. This soil was stockpiled at the Tract 42 landfill site, pending final disposal at the National Weather Service land spreading site, or other ADEC approved disposal alternative. Following excavation and collection of confirmation samples, the site was backfilled to grade with clean fill soil.

Recommended Action:

In accordance with paragraph 59 of the Two Party Agreement (NOAA 1996), NOAA requests written confirmation that NOAA completed all appropriate corrective action at the Five Car Garage and Anderson Building, TPA Site 9j/NOAA Site 25, in accordance with the Agreement and that ADEC requires no further remedial action plan from NOAA

References:

ADEC. 2000. Title 18 of the *Alaska Administrative Code* 75, Articles 3 and 9. Oil and Hazardous Substances Pollution Control Regulations. State of Alaska. Amended through October 28, 2000.

ADEC. 2002. Letter from Louis Howard (ADEC) to John Lindsay (NOAA Pribilof Project Office). May 30.

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Columbia Environmental Sciences, Inc. (CESI). 2001. Draft Site Characterization Report, Tract 46 and Vicinity (TPA Site 9), St. Paul Island, Alaska. Version 2.1. Kennewick, WA. December 16.

IT Alaska Corporation (IT Alaska). 2002. Draft Annual Groundwater Monitoring Report 2001, St. Paul Island, Alaska. March.

Mitretek. 2002. Groundwater Use and Classification in the Vicinity of Tract 46, St. Paul Island, Pribilof Islands, Alaska. Prepared by Mitretek Systems, for the National Oceanic and Atmospheric Administration. June 5.

NOAA. 1996. Pribilof Islands Environmental Restoration Two Party Agreement. Attorney General's Office File No. 66 1-95-0126, National Oceanic and Atmospheric Administration. January 26.

NOAA. 2003. Final Corrective Action Plan, Anderson Building and Five Car Garage (TPA Site 9j) Petroleum Contaminated Soils, St. Paul Island, Alaska. July 15.

NOAA. 2004. Draft Corrective Action Report Site 25/TPA Site 9j – Five Car Garage and Anderson Building, St. Paul Island, Alaska. June 25.

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For the National Oceanic and Atmospheric Administration

John Lindsay

NOAA, Pribilof Project Office

9/24/09

005,2004

Date

Approvals: In accordance with Paragraph 59 of the Two Party Agreement, this is to confirm that all corrective action has been completed at the Five Car Garage and Anderson Building, TPA Site 9j/NOAA Site 25, in accordance with the Agreement and that no plan for further remedial action is required.

For the Alaska Department of Environmental Conservation

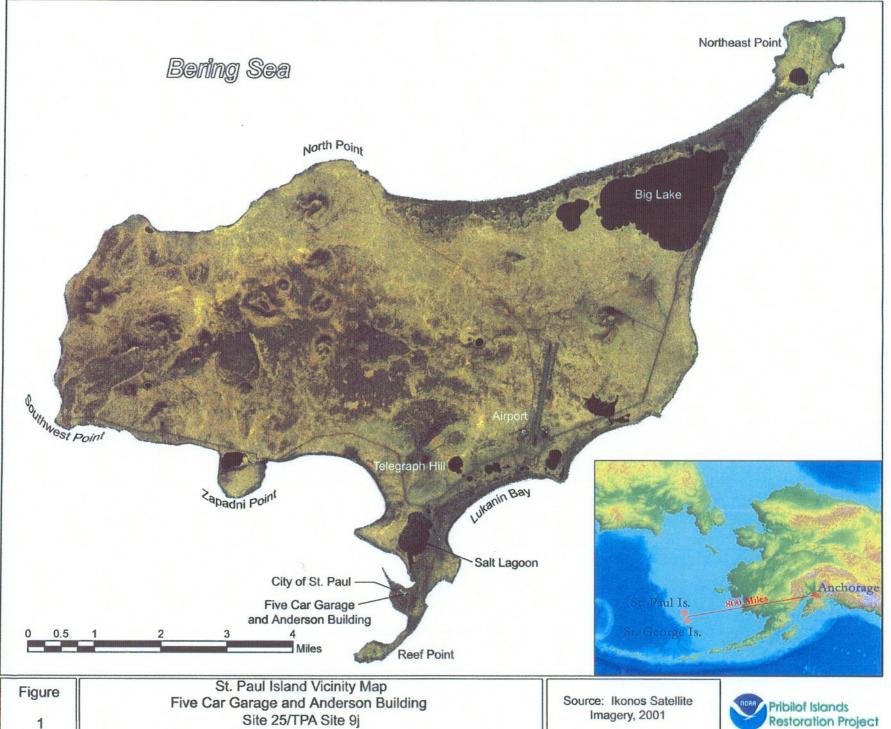
Louis Howard

Alaska Department of Environmental Conservation

Remedial Project Manager

St. Paul Island, Alaska

FIGURES



Site 25/TPA Site 9j St. Paul Island, Alaska





Figure

2

Legal Property Description Map Five Car Garage and Anderson Building Site 25/TPA Site 9j St. Paul Island, Alaska

Sources: BLM Tract (BLM MTPs 1983), TPA 9j Boundary (NOAA GIS 2004), Aerial Photo (Aeromap US 1996).





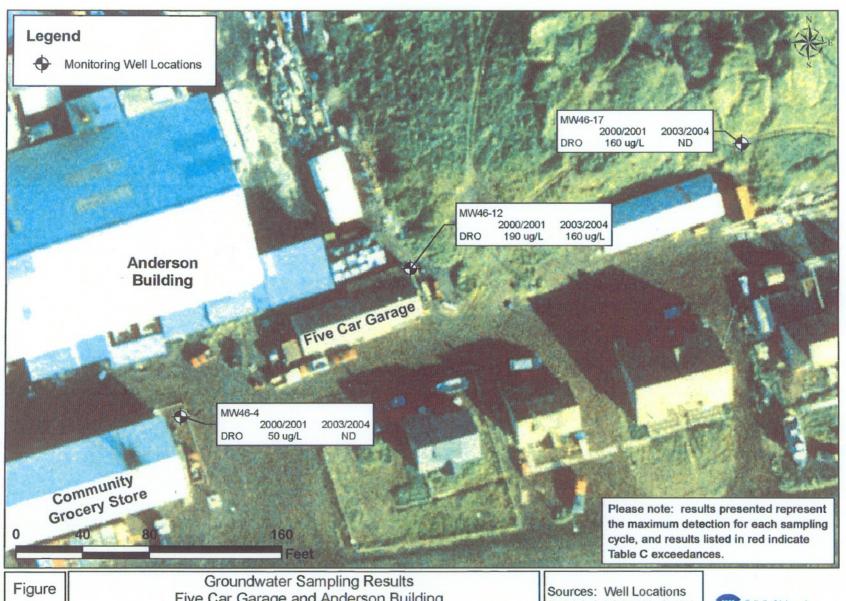
Figure

3

Historical Sampling Results
Five Car Garage and Anderson Building
Site 25/TPA Site 9j
St. Paul Island, Alaska

Sources: Historical Sampling Locations (NOAA GIS 2004), Aerial Photo (Aeromap US 1996)



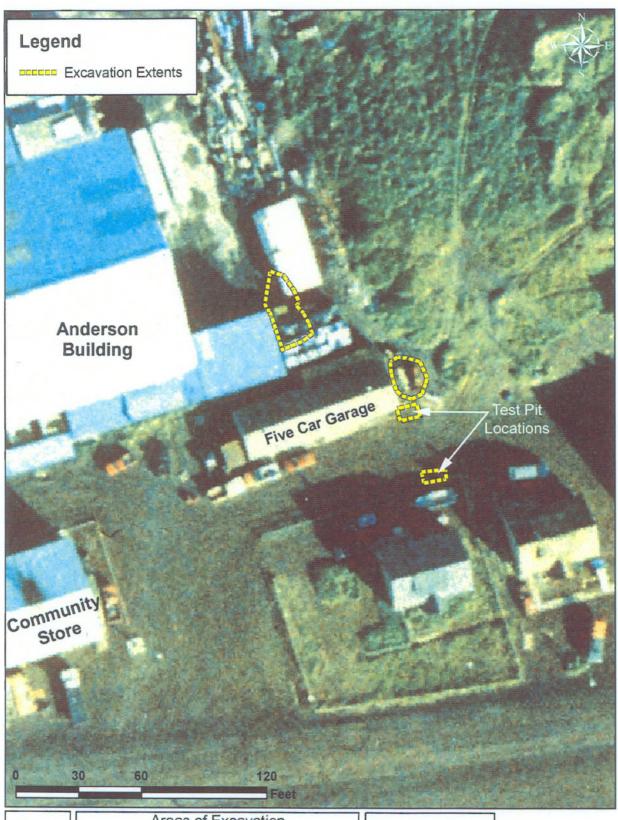


4

Groundwater Sampling Results
Five Car Garage and Anderson Building
Site 25/TPA Site 9j
St. Paul Island, Alaska

Sources: Well Locations (NOAA GPS 2003), Aerial Photo (Aeromap US 1996).





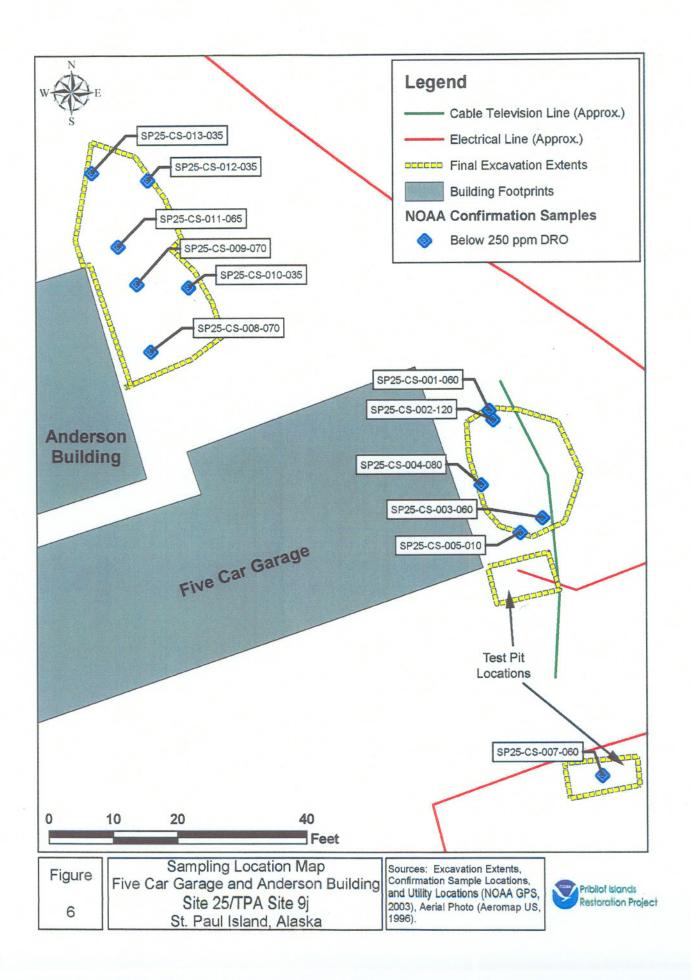
Figure

5

Areas of Excavation Anderson Building and Five Car Garage Site 25/TPA Site 9j St. Paul Island, Alaska

Sources: Excavation Extents (NOAA GPS 2003), Aerial Photo (Aeromap US 1996).





TABLES

TABLE 1

ANALYTICAL DATA SUMMARY - BTEX, GRO, DRO, RRO, AND LEAD SITE 25/TPA SITE 9j - FIVE CAR GARAGE AND ANDERSON BUILDING ST. PAUL ISLAND, ALASKA

(Page 1 of 2)

Sample Depth Sample Number (feet bgs)		Benzene (mg/kg)		Toluene (mg/kg)		Ethylbenzene (mg/kg)		Total Xylenes (mg/kg)		GRO (mg/kg)		DRO (mg/kg)		RRO (mg/kg)		Lead (mg/kg)	
TPA Site 9j Confirr	nation Samples - F	ive Car G	rage	THE REAL PROPERTY.	-	BUILDING		TO STATE	-	W. 4 74 8				1000	The state of		
SP25-CS-001-060	6	0.02	U	0.03		0.02	U	0.04		1	U	49		110		19.4	
SP25-CS-002-120	12	0.03	U	0.03		0.03	U	0.06		2	U	250		50	U	6.34	
SP25-CS-003-060	6	0.41		0.86		0.19		0.97		14		50		85		47.4	
SP25-CS-004-080	8	0.02	U	0.02	U	0.02	U	0.02	U	1	U	10	U	50	U	5.94	
SP25-CS-005-010	10	0.03	U	0.03	U	0.03	U	0.03	U	2	U	43		76		26.9	
SP25-CS-007-060	6	0.03	U	0.03		0.03	U	0.04		2	U	10	U	50	U	18.3	
PA Site 9j Confirm	nation Sample - Fi	ve Car Ga	rage C	lean Over	burde	n Material		THE U.S.		100	tool		100		1917		
SP25-CS-006 a		0.03		0.11		0.03	U	0.17	- 1	1		20		130	\neg	13.9	
PA Site 9j Confirm	nation Samples - A	nderson B	uildin	g	672	The man		VENEZUO:	1					ting Pin	1		
SP25-CS-008-070	7	0.04	U	0.04	U	0.04	U	0.04	U	2	U	10	U	50	U	1.98	
SP25-CS-009-070	7	0.04	U	0.04	U	0.04	U	0.04	U	2	U	10	U	50	U	1.93	
SP25-CS-010-035	3.5	0.04	U	0.04		0.04	U	0.04	U	2	U	10	U	50	U	4.74	
SP25-CS-011-065	6.5	0.04	U	0.04	U	0.04	U	0.04	U	2	U	10	U	50	U	1.75	
SP25-CS-012-035	3.5	0.03	U	0.03	U	0.03	U	0.03	U	2	U	10	U	50	U	1.65	
P25-CS-013-035	3.5	0.04	U	0.04	U	0.04	U	0.04	U	2	U	10	U	50	U	7.21	
rip Blank Sample		JONES AND THE		THE PART OF	100	TOWN THE RE										ATTEN	
rip blank		0.02	U	0.02	U	0.02	U	0.02	. U	1	U						
Method Two Cleanup Level *		0.02		5.4		5.5		78		300		250		10,00	00	400 f	
Alternative Cleanup Level 6		0.5		54	54		NA.		NA		1,400 °		2,500			NA	

ANALYTICAL DATA SUMMARY - BTEX, GRO, DRO, RRO, AND LEAD SITE 25/TPA SITE 9j - FIVE CAR GARAGE AND ANDERSON BUILDING ST. PAUL ISLAND, ALASKA

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bold	Indicates a concentration exceeding one or more of the applicable cleanup levels. In addition, bold text is used to indicate those results that were not detected (identified with a U) with a laboratory reporting limit above the Method Two cleanup level; however, no laboratory reporting limits
	exceeded the alternative cleanup levels.
bgs	Below ground surface
BTEX	Benzene, toluene, ethylbenzene, and total xylenes
DRO	Diesel-range organic compounds
GRO	Gasoline-range organic compounds
mg/kg	Milligram per kilogram
	Not analyzed
NA	Not available
RRO	Residual-range organic compounds
TPA	Two-Party Agreement
U	The analyte was analyzed for, but not detected above the sample reporting limit
a	Sample number SP25-CS-006 was collected from the clean overburden that was placed back into the excavation upon completion.
b	Cleanup level is from Title 18 of the Alaska Administrative Code 75, "Oil and Hazardous Substances Pollution Control Regulations," published by the State of Alaska and amended through October 28, 2000.
c	Cleanup level obtained from ADEC Method Two based on the "Ten Times Rule" applied to the migration to groundwater pathway, as discussed in Section 5.0 of the corrective action plan (National Oceanic and Atmospheric Administration [NOAA] 2003a).
d	Under the TPA, NOAA is obligated to comply with the 1991 ADEC cleanup level for benzene (0.5 mg/kg).
e	Cleanup level selected is based on more stringent value associated with ingestion and inhalation pathways.
ſ	Lead, although not a contaminant of concern identified in the corrective action plan for this site, is included because some samples collected from these sites were analyzed for lead. Although these sites are in an industrial area, NOAA is using the residential cleanup level for lead (400 mg/kg).

TABLE 2

ANALYTICAL DATA SUMMARY - POLYNUCLEAR AROMATIC HYDROCARBONS SITE 25/FPA SITE 9j - FIVE CAR GARAGE AND ANDERSON BUILDING ST. PAUL ISLAND, ALASKA

(Page 1 of 1)

Sample Number	Sample Depth (feet bgs)	Naphthalene (mg/kg)	Acenaphthylene (mg/kg)	Acenaphthene (mg/kg)	Fluorene (mg/kg)	Phenanthrene (mg/kg)	Anthracene (mg/kg)	Fluoranthene (mg/kg)	Pyrene (mg/kg)	Benz(a) anthracene (mg/kg)	Chrysene (mg/kg)	Benzo(b) fluoranthene (mg/kg)	Benzo(k) fluoranthene (mg/kg)	Benzo(a) pyrene (mg/kg)	Indeno(1,2,3- cd)pyrene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Benzo(g,h,i) perylene (mg/kg)
PA Site 9j Confirm	nation Samples, -Fi	ive Car Garage		THE RESERVE		E CERTIFICATION	STATE OF THE PARTY OF	STREET, SQUARE,	and the latest the lat	and the same		200	10 1000	and the second	A SAFETY		
P25-CS-001-060	6	0.017	0.005 U	0.005 U	0.005 U	0.012	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005
P25-CS-002-120	12	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.006	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005
P25-CS-003-060	6	1.100 D	0.018	0.012	0.022	0.230 D	0.060 D	0.031	0.039	0.030	0.024	0.020	0.005 U	0.019	0.005 U	0.005 U	0.007
P25-CS-004-080	8	0.005 U	0.005 U	0.005 U	0.005 LI	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 LI	0.005 U	0.005 U	0.005 U	0.005 U	0.005
P25-CS-005-010	10	0.005 U	0.005 U	0.005 U	0.005 U	0.017	0.005 U	0.008	0.013	0.005	0.007	0.005 U	0.005 U	0.005 U	0.005 LI	0.005 U	0.005
P25-CS-007-060	6	0.005 LI	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005
PA Site 9j Confirm	ration Sample - Fis	e Car Garage C	lean Overburden	Material				CONTRACTOR OF THE PARTY.		ALC: UNITED IN	2010101		To 30-12	210 15	ME THE PARTY		
P25-CS-006 *		0.021	0.005 LI	0.005 U	0.005 U	0.023	0.005 U	0.017	0.018	0.010	0.011	0.015	0.005 U	0.011	0.006	0.005 U	0.008
PA Site 9j Confirm	ration Samples - A	nderson Buildin		MANAGE TO LABOR.		AND SECURE	STATE OF THE PERSON	TOUR SEAL	STATE OF THE PARTY OF	THE REAL PROPERTY.	STREET, SAL		SECTION 1	The Late of S	SALES SALES	TENER IS	STOP SHOW
P25-CS-008-070	7	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005
P25-CS-009-070	7	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 LI	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005
P25-CS-010-035	3.5	0.005 U	0.005 U	0.005 U	0.005 U	0.005	0.005 1/	0.006	0.006	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 L/	0.005
P25-CS-011-065	6.5	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005
P25-CS-012-035	3.5	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005
P25-CS-013-035	3.5	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 LI	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005
tethod Two Cleanup	Level *	13	N/A	210	270	NA.	4,300	NA NA	1.500	6	620	77	110	1	11	1	NA.

Notes

bgs Below ground surface

D Result reported from diluted sample

mg/kg Milligram per kilogram

NA Not available
TPA Two-Party Agreement

U The analyte was analyzed for, but not reported above the sample reporting limit

a Sample number SP25-CS-006 was collected from the clean overburden that was placed back into the excavation upon completion.

b Cleanup level is from Title 18 of the Alaska Administrative Code 75, "Oil and Hazandous Substances Pollution Control Regulations," published by the State of Alaska and amended through October 28, 2000.